Amresh Chaurasiya

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linkedin.com/in/amresh-chaurasiya | github.com/Amresh-01 | LeetCode | CodeForces | CodeChef

Backend engineer passionate about building scalable APIs, distributed systems, and AI-powered applications. Experienced with Node.js, TypeScript, PostgreSQL, Redis, and AWS through internships, production projects, and open-source contributions. Smart India Hackathon 2025 Grand Finalist and active open-source contributor.

Education & Skills

Ajay Kumar Garg Engineering College, Ghaziabad **Expected May 2027**
B.Tech, Computer Science & Engineering — Merit Scholar | SIH 2025 Grand Finalist (top 0.5%) | 200+ DSA problems (LeetCode 1500+)

Languages: Java, Python, JavaScript/TypeScript, **C++**, SQL
Backend: Node.js, Express.js, FastAPI, REST, WebSockets, GraphQL, Microservices, JWT, OAuth 2.0
Databases/Caching: MongoDB (Aggregation, Indexing, Sharding), PostgreSQL (Window Functions, CTEs), Redis (Caching, Pub/Sub, Rate Limiting)
Cloud/DevOps: AWS (EC2, S3, Lambda, API Gateway), Docker, CI/CD, Nginx, Vercel
AI/ML: NLP, LLM (GPT-4), RAG, LangChain
Frontend: React, Next.js 14 (App Router), Tailwind CSS, shadcn/ui **CS Fundamentals:** Data Structures, Algorithms, OOP, System Design (Caching, Load Balancing, Rate Limiting, Consistent Hashing)

Experience

- **Blockchain Research Lab** **Remote**
  Backend Developer Intern *Jan 2025 – Present*
  - Built and maintained 3 backend microservices serving production traffic; optimized MongoDB queries to reduce API latency from 180ms to 85ms.
  - Deployed RBAC with JWT refresh token rotation + OAuth 2.0 for 500+ users (admin/vendor/customer roles); enforced security best practices across all services
  - Engineered CI/CD pipeline (GitHub Actions) with observability instrumentation; cut deployment time 45min→12min (73%); Added integration tests using Jest and Supertest, improving deployment confidence.
  - Shipped 12 production features across 6 sprints with a 5-engineer team, owning implementation from specification to deployment with an average lead time of 3 days and no reported critical regressions.
- **Open Source Contributor** **Remote**
  InsForge & Twenty *Jun 2026 – Present*
  - Shipped multi-admin support for **InsForge** (open-source backend platform for agentic coding): designed DB-backed admin model with bcrypt hashing, timing-attack-safe credential verification, and root-only access middleware; PR merged after a multi-round security review **#1495**
  - Fixed a Postgres RBAC gap in InsForge where `project_admin` lost SELECT access on new system tables; added a self-correcting migration with default-privilege grants **#1563**
  - Fixed a data-integrity bug in **Twenty** (open-source Salesforce alternative): corrected actor-source tagging so MCP/AI-agent writes no longer bypass workflow loop-protection filters **#22215**

Projects

- **Canteeno — Real-Time Food Ordering**
  Node.js, Express, MongoDB, Socket.io, Redis, Docker, AWS EC2
  - Shipped production MVP solo in 2 weeks; 50+ users, 10 GitHub stars, $0 marketing; 100+ concurrent WebSocket connections via Socket.io + Redis pub/sub with order-update latency under 500ms
  - Cut p95 query latency 320ms→190ms (40%) via MongoDB index optimization; deployed on AWS EC2 with 99.9% uptime and Prometheus monitoring over 3 months
  - **canteeno-peach.vercel.app** | **github.com/Amresh-01/Canteeno**
- **HealthCareAI — Intelligent Healthcare Platform**
  React, Node.js, FastAPI, MongoDB, Redis, WebRTC, NLP, GPT-4
  - Architected Intelligence Layer: unified health profile + Neural Dietary Engine (NLP+GPT-4) flagging high-risk foods
  - Privacy-focused data handling patterns inspired by HIPAA principles, with local fallback scoring for offline ML reliability; multi-role dashboards with isolated JWT auth + WebRTC live video; shipped MVP in 4 weeks
  - **healthcare-ai.vercel.app** | **github.com/Amresh-01/HealthcareAi**
- **Tiny Distributed Cache — System Design**
  Python, C++, Redis, Consistent Hashing, Docker, Locust, Prometheus
  - Designed consistent hashing ring (128 virtual nodes) using C++ and Python; 35% lower cache miss rate; TTL eviction + replication factor 2 for 99.9% availability during node failures
  - Benchmarked at 10K req/s (Locust); p99 latency under 15ms; exported metrics to Prometheus for observability | **github.com/Amresh-01/tiny-distributed-cache**

Achievements

- **Smart India Hackathon 2025 — Grand Finalist** (Top 25/5000+ teams, top 0.5%): Built an AI-powered timetable generator using Constraint Satisfaction (CSP) in C++ and Python, reducing manual scheduling effort by 80% for 500+ faculty members. schedulifyai.live
- **Competitive Programming:** LeetCode Rating 1500+ | Codeforces Rating 966 (Pupil) | CodeChef 2-Star | Solved 200+ DSA problems across graphs, dynamic programming, trees, and greedy algorithms.
- **Teaching Assistant:** Mentored 50+ first-year students in Data Structures, Algorithms, Python, and Git/GitHub, developing curriculum and hands-on coding sessions aligned with core CS fundamentals.